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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/981,444	10/17/2001	Graham Taylor	0476-2044.1	5834
23644 7590 11/12/2010 BARNES & THORNBURG LLP P.O. Box 2786 CHICAGO, IL 60690-2786			EXAMINER CHOUDHURY, AZIZUL Q	
			ART UNIT 2453	PAPER NUMBER
			NOTIFICATION DATE 11/12/2010	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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Patent-ch@btlaw.com

Office Action Summary	Application No. 09/981,444	Applicant(s) TAYLOR ET AL.	
	Examiner AZIZUL CHOUDHURY	Art Unit 2453	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 8/27/2010.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9, 18, 20 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 18, 20 and 22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

Detailed Action

This office action is in response to the correspondence received on August 27, 2010.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-9, 18, 20 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sciacca (US Patent No: 6,760,761) in view of Strom et al (US Patent No: 7,010,796) hereafter referred to as Sciacca and Strom, respectively.

1. With regards to Claims 1, 20 and 22 the Sciacca discloses through Strom: a method comprising: generating structured meta-data providing at least one semantic information element describing a characteristic of an interface capability of each of a first entity and at least one other entity, said entities seeking to

communicate across a network, wherein an interface of the first entity has at least one different characteristic from an interface of the second entity (*Sciacca teaches network devices that have different configurations (different characteristics); see column 2, lines 28-38, Sciacca. The devices have structured meta-data associated with them; see column 5, lines 3-15, Sciacca*); collating the at least one semantic information elements of said first entity with corresponding at least one semantic information elements of said at least one other entity (*Sciacca teaches how device configurations stored and managed (collated) based on semantics; see column 5, lines 3-15, Sciacca*); at run-time analyzing the at least one pair of said collated semantic information elements to establish the extent to which the interface capabilities of said entities are compatible (*Sciacca teaches constraint checks; see at least column 5, lines 55-66, Sciacca. Also see Strom below*); and automatically generating in accordance with said established compatibility the adaptive software interface for said entities, such that the entities are able to communicate despite the fact that the interface capabilities of the entities are different (*Sciacca teaches the adjustment of device configurations so that they can comply with the needs of the infrastructure/network (in other words, so that they can communicate with the other network devices); see column 6, lines 13-22, Sciacca*)

While Sciacca teaches the adjustment of device configurations (using structured meta-data) to ensure proper communication between devices within the network, Sciacca does not explicitly cite the run-time analysis of a pair of

collated semantics and automatic generation of adaptive software interface. In the same field of endeavor, Strom also teaches interfaces for device environment compatibility; see column 7, lines 5-10, Strom. Within Strom's disclosure it is taught how there are two string generators (pair of collated semantic information elements); see column 8, lines 2-3, Strom. The pair of string generators are used during runtime to map (analyze) compatible interfaces; see column 8, lines 13-21, Strom. Furthermore, Strom discloses how it is possible to automatically generate components that provide an application programming interface; see column 4, lines 22-24, Strom. The application programming interface enables compatibility between two otherwise non-compatible computing environments. Therefore it would have been obvious, to one skilled in the art, during the time of the invention, to have combined the teachings of Sciacca with those of Strom, to provide an interface enabling two incompatible computing environments to communicate; see column 8, lines 17-21, Strom.

2. With respect to Claim 2, the Sciacca discloses through Strom a protocol where entities exchange interfaces via a so-called Lookup Service, thus disclosing: wherein the step of collating occurs dynamically during a preliminary exchange between the two entities prior to an interface being established between the two entities (*Sciacca teaches devices looking up configuration information; see column 4, lines 52-66, Sciacca*).

3. With regards to Claim 3, the Sciacca discloses through Strom said structured meta-data includes associated meta-data for at least one said semantic information element (*see column 5, lines 5-6, Sciacca*).
4. With regards to Claim 4, the Sciacca discloses through Strom the semantic information element describing the characteristics of said adaptive interface is provided in said meta-data in a form independent of the version of software used to generate said metadata (*Sciacca teaches independently stored meta-data; see column 5, lines 3-15, Sciacca. Strom also teaches meta values (meta-data) containing strings (semantics); see at least column 3, lines 38-45, Strom*).
5. With regards to Claim 5, the Sciacca discloses through Strom semantic information compiled into classes by a Java compiler, thus disclosing: wherein said semantic information element is generated by a compiler receiving input data from an interface description and a code template (*Java is a standardized configuration language; see column 7, lines 50-51, Sciacca*).
6. With regards to Claim 6, the Sciacca discloses through Strom said interface description includes a model of the data to be communicated across the interface and a code template (*see column 3, lines 13-23, Sciacca*).

7. With regards to Claim 7, the Sciacca discloses through Strom a protocol that initially registers entity descriptions and interfaces, thus disclosing: wherein said semantic information element provided by said meta-data has a form which can be mapped to an appropriate transport layer and exchanged between said networked entities prior to a higher level interface being established between said networked entities (*See column 5, lines 3-15 and column 7, lines 35-42, Sciacca. Strom also teaches meta values (meta-data) containing strings (semantics); see at least column 3, lines 38-45, Strom. Strom teaches how the computing environments to be made compatible through interface can be network devices (hence requiring mapping to the appropriate network layer); see column 8, lines 39-40, Strom*).
8. With respect to Claims 8 and 18, the Sciacca discloses through Strom: a method of establishing a compatible interface between an initiator entity and a responder entity seeking to communicate across a network in the case where an interface of the initiator has at least one differing characteristic from an interface of the responder comprising the steps of: generating at least one meta-data structure providing at least one semantic information element for each entity, wherein each said semantic information element describes a characteristic of an interface capability of one of said entities (*Sciacca teaches network devices that have different configurations (different characteristics); see column 2, lines 28-38, Sciacca. The devices have structured meta-data associated with them; see*

column 5, lines 3-15, Sciacca); collating the said meta-data structures such that the at least one semantic information element corresponding to the initiator's interface capability is collated with the corresponding at least one semantic information element corresponding the responder's interface capability (*Sciacca teaches how device configurations stored and managed (collated) based on semantics; see column 5, lines 3-15, Sciacca*); at run-time, analyzing the collated pair of semantic information elements to determine the extent to which the initiator and the responder can generate a compatible interface (*Sciacca teaches constraint checks; see at least column 5, lines 55-66, Sciacca. Also see Strom below*); automatically establishing in accordance with said analysis an interface between said initiator and said responder which enables them to communicate across the network despite the fact that the interface capabilities of the entities are different (*Sciacca teaches the adjustment of device configurations so that they can comply with the needs of the infrastructure/network (in other words, so that they can communicate with the other network devices); see column 6, lines 13-22, Sciacca*)

While Sciacca teaches the adjustment of device configurations (using structured meta-data) to ensure proper communication between devices within the network, Sciacca does not explicitly cite the run-time analysis of a pair of collated semantics and automatic establishing of adaptive software interface. In the same field of endeavor, Strom also teaches interfaces for device environment compatibility; see column 7, lines 5-10, Strom. Within Strom's disclosure it is

taught how there are two string generators (pair of collated semantic information elements); see column 8, lines 2-3, Strom. The pair of string generators are used during runtime to map (analyze) compatible interfaces; see column 8, lines 13-21, Strom. Furthermore, Strom discloses how it is possible to automatically generate (establish) components that provide an application programming interface; see column 4, lines 22-24, Strom. The application programming interface enables compatibility between two otherwise non-compatible computing environments. Therefore it would have been obvious, to one skilled in the art, during the time of the invention, to have combined the teachings of Sciacca with those of Strom, to provide an interface enabling two incompatible computing environments to communicate; see column 8, lines 17-21, Strom.

9. With regards to Claim 9, the Sciacca discloses through Strom the meta-data structure is provided in a form suitable for indicating at least one semantic element taken from the group including: a description, a range, a default value (see column 5, lines 3-15, Sciacca).
10. The obviousness motivation applied to claims 1, 8, 18 and 20 are applicable towards their respective dependent claims.

Response to Arguments

Applicant's arguments with respect to claims 1-9, 18, 20 and 22 have been considered but are moot in view of the new ground(s) of rejection. In lieu of the latest claim amendments the previously issued 112-type enablement rejection has been withdrawn. Furthermore, a new search has been conducted and the new Strom prior art has replaced the Vogel prior art.

As per the first argument that the Sciacca prior art does not teach, "structured meta-data...describing...each of a first entity and at least one other entity, said entities seeking to communicate across a network," the examiner disagrees with this assertion. The applicant refers to solely column 5, lines 41-52 to discredit the Sciacca prior art. This analysis of the Sciacca prior art is incomplete. The examiner provided multiple citations with corresponding explanations. Sciacca teaches the configuration database storing meta-data that describes the semantics of interfaces. Sciacca discloses how this data is collected for the managed device and stored in the configuration database; see column 5, lines 3-7, Sciacca. Sciacca then also discloses how this data is collected for the client-end device and stored in the configuration database; see column 5, lines 41-52, Sciacca. This data is then used to provide a compliant interface on the managed device to the client-end device; see column 4, lines 7-12, Sciacca.

The second point of contention addressed by the applicant concerns the amended claim feature of collating the at least one semantic information element of said first entity with the corresponding at least one semantic information element of said at least one other entity. The applicant contends that this claim feature is not taught, the

examiner disagrees. The claim feature is claiming that between the two devices wishing to communicate, semantic information is collected and collated from each device (the first device and the corresponding device with which to communicate with). Sciacca teaches how device configurations stored and managed (collated) based on semantics; see column 5, lines 3-15, Sciacca. Furthermore, Strom also teaches interfaces for device environment compatibility; see column 7, lines 5-10, Strom. Strom discloses how there are two string generators (pair of collated semantic information elements); see column 8, lines 2-3, Strom. The pair of string generators are used during runtime to map (analyze) compatible interfaces; see column 8, lines 13-21, Strom.

The third point of contention addressed by the applicant relies on the newly amended limitation of: analyzing the least one pair of said collated semantic information elements, at runtime. Due to this limitation being newly claimed, the examiner performed a new search and found the Strom prior art. Strom also teaches interfaces for device environment compatibility; see column 7, lines 5-10, Strom. Within Strom's disclosure it is taught how there are two string generators (pair of collated semantic information elements); see column 8, lines 2-3, Strom. The pair of string generators are used during runtime to map (analyze) compatible interfaces; see column 8, lines 13-21, Strom.

The fourth and final point of contention addressed by the applicant concerns the claim feature of automatically generating in accordance with said established compatibility an adaptive software interface for said entities. The applicant contends

that this claim feature is not taught. The examiner respectfully disagrees. Sciacca teaches the adjustment of device configurations so that they can comply with the needs of the infrastructure/network (in other words, so that they can communicate with the other network devices); see column 6, lines 13-22, Sciacca. However Sciacca does not explicitly cite the interface being automatically generated. In the same field of endeavor, Strom also teaches interfaces for device environment compatibility; see column 7, lines 5-10, Strom. Strom discloses how it is possible to automatically generate components that provide an application programming interface; see column 4, lines 22-24, Strom.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AZIZUL CHOUDHURY whose telephone number is (571)272-3909. The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Krista Zele can be reached on (571) 272-7288. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/A. C./
Examiner, Art Unit 2453

/Krista M. Zele/
Supervisory Patent Examiner, Art Unit 2453